IN THE CLAIMS

Please amend the claims as follows:

1. (original) An image projector (100) with:

an optical system (110), comprising a High-Intensity-Discharge HID lamp (112), in particular an Ultra High Pressure UHP lamp, and arranged after this a display field (114) and a lens unit (116) for projecting an image prepared on the display field (114) through the lens unit (116) onto a picture screen device (118);

a lamp driver (131) for providing a supply voltage to the HID lamp; and

an image processor (120) for providing the image for the display field (114); characterized by

- a sensor device (140) for detecting the brightness, in particular the brightness distribution and/or the overall brightness, of the light incident on the display field (114) at various times;
- a comparator device (150) for comparing the brightness of the light detected by the sensor device (140) at a previous moment t-2 and a moment t-1, which is later in time than moment t-2, and for generating a brightness control signal which represents a change in brightness caused by an arc jump that occurred in the HID lamp (112) between the moments t-2 und t-1; and

- a control device (113, 120′, 132) for compensating the detected change in brightness in response to the brightness control signal by resetting the brightness of the light incident on the picture screen device (118) at a moment t0 later than t-1, in particular to the brightness detected at the previous moment t-2, and by subsequent conversion of the reset brightness during a predetermined time interval T to the brightness detected at the later moment t-1, the resetting of the brightness occurring so soon after the arc jump, and the conversion of the brightness during the time interval T occurring so slowly that the changes in the brightness of the light incident on the picture screen device (118) caused by the arc jump, the reset, and the conversion are not perceptible to the human eye.

2. (original) An image projector (100) as claimed in Claim 1, characterized in that the optical system (110) comprises an optical integrator (112a) connected downstream of the HID lamp (112) for an at least partial compensation of the brightness distribution of the light incident on the display field (114) so as to achieve a uniform distribution.

3. (currently amended) An image projector (100) as claimed in Claim 1~~ or 2~~, characterized in that the control device is designed

as an electrically controllable optical filter (113) and is arranged in the beam path of the optical system (110) in front of or behind the display field (114).

4. (original) An image projector (100) as claimed in Claim 3, characterized in that the optical filter (113) is designed as an adjustable gray tone mask.

5. (currently amended) An image projector (100) as claimed in ~~any one of the Claims 1 to 4~~claim 1, characterized in that the control device - if applicable, in addition to the optical filter (113) - comprises a component (120') of the image processor (120) for resetting and converting the brightness of the image provided by the image processor (120) for the display field (114) in response to the brightness control signal.

6. (original) An image projector (100) as claimed in Claim 5, characterized in that the image processor (120) is designed to output the image - so long as no arc jumping occurs - to the display field (114) with an overall brightness preferably reduced by a few percentage points compared with a nominal overall brightness of 100%; in order that, when a reduced overall brightness of the light compared with the moment t-2 has been

detected in the comparison with moment t-1 because of arc jumping that took place in the meantime, it can raise the overall brightness of the image generated by the image processor (120) for the display field (114) to a maximum of at most 100% of the overall brightness in response to a part of the brightness control signal relating to the overall brightness so fast that this change in the overall brightness is not perceptible to the human eye.

7. (original) An image projector (100) as claimed in Claim 5, characterized in that the image processor (120) is designed - if no further arc jumping has occurred for at least a predetermined time interval $\Delta t1$- to increase the overall brightness of the image output to the display field (114), starting from a reduced overall brightness, to a nominal overall brightness of 100%, in order subsequently - if the arc jumping has resumed - once again to reduce the basic brightness of the image to be output to the display field (114) to a suitable overall brightness value to compensate for the change in the overall brightness caused by the arc jumping.

8. (original) An image projector as claimed in Claim 7, characterized in that both the raising of the overall brightness to

100% and also its reduction occur so slowly, preferably over a few seconds, that they are not perceptible to the human eye.

9. (currently amended) An image projector (100) as claimed in ~~any one of the preceding claims~~claim 1, characterized in that the control device, preferably in addition to the optical filter (113) and/or the component (120') of the image processor, comprises a lamp control unit (132) connected to the lamp driver (131) for controlling the light quantity emitted by the HID lamp (112) into the optical system (110) in response to a light quantity signal generated by the comparator device (150), which signal represents the overall brightness component of the brightness control signal, in so far as the overall brightness is not already being compensated by an appropriate activation of the optical filter (113) or the image processor (120).

10. (original) An image projector (100) as claimed in Claim 9, characterized in that the lamp control unit (132) is designed to implement a necessary compensation in excess of the nominal overall brightness of 100%, in compensation for the reduction in the overall brightness caused by the arc jumping.

11. (original) An image projector (100) as claimed in Claim 10, characterized in that

- the lamp control unit (132) is designed to activate the HID lamp (112) such that immediately after the moment t0 the lamp (112) additionally feeds the same light quantity (F2) into the optical system as it fed too little (F1), in relation to a nominal light quantity, into the optical system in the period between the previous arc jump and the moment t0 owing to a reduction in the brightness of the light caused by the arc jumping; or
- the lamp control unit (132) is designed to activate the HID lamp (112) such that immediately after the moment t0 the lamp (112) feeds the same light quantity (F2) less into the optical system as it fed too much (F1), in relation to a nominal light quantity, into the optical system in the period between the previous arc jump and the moment t0 owing to an increase in the brightness of the light caused by the arc jumping.

12. (currently amended) An image projector (100) as claimed in ~~any one of the preceding claims~~claim 1, characterized in that the sensor device (140) is designed for simultaneous detecting of the overall brightness and/or the brightness distribution of the light.

13. (currently amended) An image projector (100) as claimed in ~~any one of the Claims 1 to 11~~claim 1, characterized in that the sensor device (140) comprises at least two sensor elements (140-1, 140-2, ...) arranged in different locations in the beam path of the optical system.

14. (original) An image projector (100) as claimed in Claim 13, characterized in that the sensor elements (140-1, 140-2,...) are arranged in a distributed manner over the surface and/or on the edge of the display field (114).

15. (original) An image projector (100) as claimed in Claim 14, characterized in that the display field (114) is polygonal, in particular rectangular in design, and that a sensor element is arranged centrally on an edge portion and/or on the corners of the display field (114) each time.

16. (original) An image projector (100) as claimed in Claim 12, characterized in that the optical system (110) comprises an optical light decoupling device, in particular a dichroic passive reflector, for decoupling a representative portion of the light incident on the display field (114); and that the sensor device

(140) is arranged in a suitable position outside the beam path for detecting the decoupled part of the light.

17. (original) A method of operating an image projector (100) with a High-Intensity-Discharge HID lamp (112), in particular an Ultra High Pressure UHP lamp, a display field (114), and a lens unit (116), comprising the step of:

projecting an image prepared on the display field (114) with the help of the HID lamp (112) through the lens unit (116) onto a picture screen device (118); characterized by:

- detecting the brightness, in particular the overall brightness and/or the brightness distribution of the light incident on the display field (114) at various times;
- comparing the brightness detected for the light at a previous moment t-2 and a later moment t-1, and if at the later moment t-1 a change of brightness caused by an arc jump that occurred in the HID lamp (112) was detected compared with the previous moment t-2,
- compensating the detected change in brightness of the light by resetting the brightness of the light incident on the picture screen device (118) in particular to the brightness recorded at the previous moment t-2, in order subsequently to convert this brightness during a predetermined time interval T to the

brightness recorded at the later moment t-1, the resetting occurring so soon after the arc jumping, and the conversion of the brightness during the time interval T occurring so slowly, that the respective related changes in the brightness of the light incident on the picture screen device (118) are not perceptible to the human eye.

18. (original) A method as claimed in Claim 17, characterized in that it is established in the comparison of the brightnesses whether a geometric shift in the location of the maximum for the brightness distribution and/or a change in the overall brightness of the light detected by the sensor device (140) has occurred between the previous moment t-2 and the later moment t-1.

19. (original) A method as claimed in Claim 18, characterized in that the step for resetting the brightness comprises the following sub-steps:

- calculation of a mathematical compensation time function which represents the detected change in the brightness; and
- modification of the current brightness of the light incident on the picture screen device (118) in accordance with the compensation time function such that the brightness of the light is once again set to that at the previous moment t-2.

20. (original) A method as claimed in Claim 17, characterized in that the step of converting the brightness of the previous moment t-2 to that of the later moment t-1 occurs in accordance with an increasing damping of the compensation time function over the time interval T in a predetermined way.

21. (original) A method as claimed in Claim 17, characterized in that the scale of the time interval T is in the range of a few seconds.